History and the American Indian

Education Unit

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1. *Course:* Advanced Placement Biology
2. *Unit Goals:* Within the next week, our class will dive into Diabetes Mellitus and its impact on Native Americans. With that said, we will be focusing on the differences and similarities between Native American way of life compared to the average American’s day to day life. I invite you to keep an open mind when looking into the causes, effects, and outcomes of Diabetes Mellitus. Throughout each lesson, be prepared to discuss the effects of Diabetes Mellitus on a worldly and personal level. Participation is imperative and your key to finding success in my class. We will learn about the different types of Diabetes Mellitus and ways to treat and prevent its outcomes on individuals in all environments. I chose to use the United States National Library of Medicine database. This information unit will help explain the issues that affect the health of Native Americans. More specifically, we will be looking into the Native American Diabetes Project. This is an interactive website that holds a variety of information. Students will be divided into three separate groups and one will present daily on a topic of choice. The purpose of this unit is to increase one’s knowledge on the importance of preventing and treating Diabetes Mellitus. This unit is going to be upbeat and a time to learn about a realistic subject that many families and communities face. At the end of each class, students will be asked two questions about the presentations of the day. The answers to the questions will be used as an exit slip. Therefore, each question must be answered before exiting class. Each question is worth five points.
3. *Monday 11/25/13:*

-A five question pop quiz will be held about why Diabetes is an increasing   
 problem in the United States. This quiz will allow me   
 to understand how much prior knowledge the students have about this health   
 impairment.

-I will be dividing the class into two teams for a discussion that will last ten   
 minutes:

One team is going to explain how one gets diabetes and the other will   
 discuss how to prevent diabetes.

-This will enable students to work together and teach each other, in a sense. This is a constructivist philosophy. A constructivism approach supports student- centered learning rather than a teacher-centered curriculum. By using this teaching method, this will be beneficial to the student because they are the key to learning.

-The pop quiz will not be graded. However, an announcement will be made that   
 there will be two questions that will be asked for the end of each class period,

for the week. The two questions will count towards one’s grade.

-The class will come together and sit in one’s assigned seating. I will be writing the answers that the teams came up with for each question on the board. This   
 will be a background learning experience for the students before I introduce the   
 website.

-Introduce the Native American Diabetes Project website and how to navigate   
 to different areas for your group presentations. We will develop a better understanding of the causes, effects, and outcomes of Type 1 and Type 2 Diabetes. Additionally, students will have awareness of the Native American Diabetes Project; yet also understand that all individuals are vulnerable to Diabetes.

The website that will be introduced:  
 <http://www.laplaza.org/health/dwc/nadp/

-Ask two questions that the students will answer on a blank sheet of paper:

1. List three causes of Type 2 Diabetes?

Answers:

Unhealthy choices for eating, genetics, and other various lifestyle influences

2. Why is Diabetes a major health issue for Native American individuals?

Answers:

Lack of education about various health issues, genetics, and obesity in many tribes.

-Before leaving the classroom, the sheet of paper will be their “exit slip”.

*Tuesday 11/26/13:*

*-*I will start class with a prepared example presentation about what Diabetes Mellitus is, and I will advise students to take notes on not only the body of the presentation but facts as well. This will show what I expect for length, detail, and group participation. Each presentation should last between 10-15 minutes. As a visual, there are 20 students in our classroom. Each student is required to take a portion of the material and present to the class. I will be   
 looking for five clear points upon why your selected topic is important and appropriate to what the unit is about. An introduction, conclusion and visual are   
 also required. Students will be presenting via PowerPoint. I will select groups at the end of my example presentation.

Groups will then be selected by a verbal randomized number count. For example, students who are labeled “one” will be grouped with other “ones” Students that are in-group one will choose a topic from the “Exercise More!” Category from the website. Group two will then choose a topic from “Eat Less Sugar”. Group three will select a topic from “Staying on The Path”   
 Website used: <http://www.laplaza.org/health/dwc/nadp/

Once groups have selected their topics, students will exchange information so that students are able to be in contact. Moreover, I will allow time for students to begin researching as a group. I will be monitoring group participation during this time. With ten minutes left in class, I will ask two questions that will relate to my example presentation:  
 1. How many clear points with explanations am I looking for in each   
 presentation?  
 Answer:   
 Five, with no exceptions.  
 2. What is Diabetes mellitus?  
 Answer:   
 Diabetes mellitus refers to a group of diseases that affect how your body uses blood glucose, commonly called blood sugar   
 [Staff, Mayo. "Definition." Mayo Clinic. Mayo Foundation for Medical Education and Research, 31 Jan. 2013. Web. 24 Nov. 2013. <http://www.mayoclinic.com/health/diabetes/DS01121>.](Staff,%20Mayo.%20%22Definition.%22%20Mayo%20Clinic.%20Mayo%20Foundation%20for%20Medical%20%09%09%09%09Education%20and%20Research,%2031%20Jan.%202013.%20Web.%2024%20Nov.%202013.%20%09%09%09%09%09%3chttp://www.mayoclinic.com/health/diabetes/DS01121%3e.)

-Answers that have been placed on a blank sheet of paper will be used as an exit slip.

*Wednesday 11/27/13:*

-In today’s class, students will continue working in their assigned groups in preparation for their presentations. I asked the class when the students would be willing to present, and group two chose to present first. Additionally, by choosing to go first, I will give each student within the group two bonus points for volunteering to present first. The schedule will go as following:

-Group two will present Thursday, November 28, 2013.

-Group three will present Friday, November 29, 2013.

-Group one will present Monday, December 2, 2013

-I will offer two options for the group’s research: One option is to go to the library, while option number two is to go to the computer lab. If students choose not to finish all the work in class, it would be recommended to meet up with partners outside of school to finish final preparations.

-I will walk around and assist students when needed. Additionally, I will hand out a rubric for the students, so that each individual understands the grading scale. I will also state that the Work Cited page must be in MLA format.

-With ten minutes left in class, I will go to the library and computer lab and ask the two questions that will relate to today’s research:

1. What is the correct formatting for your Work Cited page? MLA or APA?

Answer:

MLA Format

2. What was the most surprising fact that you learned today about Native Americans, in relation to Diabetes Mellitus?

Possible Answers:

There is a Native American Diabetes Project, Traditional Native American foods, Native American Activities

*Thursday 11/28/13*

-In today’s class, I will begin class with a short video. I will make an announcement that the students must take notes on both the video and presentation, because the two questions for today could possibly be from the presentation or video.

Today’s short video:

["Diabetes among Native Americans - Genes or Environment?." *YouTube*. YouTube, 3 July 2008. Web. 24 Nov. 2013. <http://www.youtube.com/watch?v=SfPdhhXcGRQ>.](%22Diabetes%20among%20Native%20Americans%20-%20Genes%20or%20Environment?.%22 YouTube.%20%09%09%09%09%09YouTube,%203%20July%202008.%20Web.%2024%20Nov.%202013.%20%09%09%09%09%09%3chttp://www.youtube.com/watch?v=SfPdhhXcGRQ%3e.)

-I will elaborate on the information given in the clip. I will talk about how the priorities are not being met in the given community. Often times, gym classes are being cut, while the allocations for research show a direct link between exercise and Diabetes Mellitus.

-I will offer a five-minute discussion about the cutting of gym classes and what it means to students versus school boards and parents. Furthermore, it is imperative to mention that without gym classes or activities, student obesity has increased drastically.

-Group two will present, and I will be grading by using the rubric.

-The student’s will be taking notes and thinking about ways to modify diet, so that they understand the importance of sugar intake.  
 -After group two finishes their presentation, there will be a five-minute question/answer period. This will be a time to have all students engage within the class and to recall the information that was given.

-With five minutes left in class, I will give students a two-question quiz, which will be used as their exit slip.  
 1. In the early 1900’s was Diabetes Mellitus highly prevalent in Southwestern Tribes? True or False

Answer:

False, Was not a common problem when individuals lived in a different environment and had different lifestyles.

2. Why is it important to decrease your sugar intake?  
 Answer: Too much sugar in one’s blood overtime can lead to risks of serious complications. For example, blindness, amputations, and kidney problems are a few common answers.

*Friday 11/29/13*

-Class will begin with another video.   
 ["Diabetes in Native American Communities: Journey of Hope Rosebud   
 Reservation." *YouTube*. YouTube, 10 Apr. 2012. Web. 24 Nov. 2013.   
 <http://www.youtube.com/watch?v=KujmFQaT5Bk>.](http://www.bibme.org/)  
 -I will make note of the differences in Diabetes Mellitus from the average American to Native Americans. I will also talk about the differences between separate Native American Tribes. Additionally, I will offer a discussion to the class and ask what students found interesting from the video.

-Group three will present on various methods that assist in not only prevention with Diabetes Mellitus, but also how one can deal with Diabetes Mellitus and maintain a healthy and normal life.

-Students will be taking notes on various methods to stay on track with a healthy lifestyle. They will also be paying attention to the presentation, in preparation for the quiz.

- After group three finishes their presentation, there will be a five-minute question/answer period. This will be a time to have all students engage within the class and to recall the information that was given.

-With five minutes left in class, I will give students a two-question quiz, which will be used as their exit slip.

1. In the Rosebud Sioux Tribe, Type two Diabetes was adequately lower than the average for Native American Tribes: True or False

Answer:

False. In the Rosebud Sioux Tribe, rates of death from Type two diabetes is one of the highest in the world.

2. How can family, children and friends help one cope with Diabetes Mellitus?

Possible Answers:  
 Keeping one another active, eating healthy meals together, and living healthy lifestyles, and communicating about their progress. Moreover, education about Diabetes Mellitus is essential.

*Monday December 2, 2013:*

-I will begin class with having Group one present over the “Exercise More!” category. More specifically, the group will explain the correlation between exercise and Diabetes Mellitus.

-I will be grading by using the rubric, and will be paying attention to whether the students incorporated Native Americans within their   
 research.

- Students will be taking notes on the presentation and will be considering the numerous benefits between exercise and Diabetes Mellitus. Likewise, students will be preparing one’s self for the quiz at the end of the day.

-After group three finishes their presentation, there will be a five- minute question/answer period. This will be a time to have all students engage within the class and to recall the information that was given.

-With ten minutes left in class, I will give students the five -question pop quiz that I gave at the beginning of the Diabetes Mellitus and Native American unit. This will show me what the students have learned from this unit.

Pop Quiz

1. What group of individuals is twice as likely to die from complications of diabetes?
2. How can one take care of one’s self if he or she has diabetes?
3. What are three complications of Diabetes among Native Americans, for example?
4. What are three signs of Diabetes?
5. There is only one kind of Diabetes: True or False

Answers:

1. According the National Institute of Health, Indians, on the average, are twice as likely to die from complications of Diabetes Mellitus than non-Indians.
2. Diabetes Mellitus has potential to lead to serious issues with one’s health. Scheduling appointments with one’s doctor for check ups is key as well as keeping an eye on blood sugar levels. Additionally, maintaining a healthy diet and staying active is imperative.
3. According to National Network of Libraries of Medicine, a major concern is the fact that there are increasing rates of kidney failure, blindness, as well as amputations. For example, Amputation among Native Americans, for example are three to four times higher than the general population.
4. Blurry eyesight, itchy skin, losing weight without trying, losing feeling in the feet or having tingling in the feet.
5. False, there is Type one and Type two Diabetes Mellitus.

Sample “Exit Slip Questions:

1. List three causes of Type 2 Diabetes

2. Why is Diabetes a major health issue for Native American individuals?

3. How many clear points with explanations am I looking for in each presentation?

4. What is Diabetes Mellitus?

5. What is the correct formatting for your Work Cited page? MLA or APA?  
 6. What was the most surprising fact that you learned today about Native Americans, in relation to Diabetes Mellitus?

7. In the early 1900’s, was Diabetes Mellitus highly prevalent in the Southwestern Tribes?

8. Why is it important to keep an eye on one’s sugar intake?

9. In the Rosebud Sioux Tribe, Type two Diabetes was adequately lower than the average for Native American Tribes? True or False

10. How can family, children and friends help one cope with Diabetes Mellitus?

Answers:

1. Unhealthy choices for eating, genetics, and other various lifestyle influences
2. Lack of education about various health issues, genetics, and obesity in many tribes
3. Five, no exceptions
4. Diabetes mellitus refers to a group of diseases that affect how your body uses blood glucose, commonly called blood sugar  
    ([staff, Mayo. "Definition." Mayo Clinic. Mayo Foundation for Medical Education and Research, 31 Jan. 2013. Web. 24 Nov. 2013. <http://www.mayoclinic.com/health/diabetes/DS01121>.](staff,%20Mayo.%20%22Definition.%22%20Mayo%20Clinic.%20Mayo%20%09Foundation%20for%20Medical%20Education%20and%20Research,%2031%20Jan.%202013.%20Web.%2024%20Nov.%202013.%20%09%09%3chttp://www.mayoclinic.com/health/diabetes/DS01121%3e.)
5. MLA Format
6. There is a Native American Diabetes Project, Traditional Native American foods, Native American activities
7. False. This was not a common problem when individuals lived in a different environment and had different lifestyles.
8. Too much sugar in one’s blood can lead to risks of serious complications. For example, blindness, amputations, and kidney problems are a few common answers.
9. False. In the Rosebud Sioux Tribe, rates of death with Type two diabetes are one of the highest in the world.
10. Possible Answers:  
    Keeping one another active, eating healthy meals together, and living healthy lifestyles, and communicating about their progress. Additionally, education about Diabetes Mellitus is imperative.

Sample PowerPoint Presentation: What is Diabetes Mellitus?

Slide One:

What is Diabetes Mellitus?

* Diabetes mellitus refers to a group of diseases that affect how your body uses blood glucose, commonly called blood sugar

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Slide Two:

Diabetes Myths, According to the American Diabetes Association,

* Diabetes isn’t a serious disease.   
  Fact: According to diabetes.org, two out of three people with diabetes die from heart disease or stroke
* People with Type 2 Diabetes are overweight  
  Fact: Although being overweight is a risk factor for having Diabetes, there are many other risk factors. For example, family history, age, and ethnicity are factors. Many individuals with Type 2 Diabetes can be at a normal weight or simply moderately overweight.
* You cannot eat sweets if you struggle with Diabetes   
  Fact: If sweets are combined with exercise and healthy eating habits on a regular basis, one can treat one’s self. Although sweets may harm one’s health, a small portion can be eaten on a special occasion, for example.
* If Sally has Diabetes, I can no longer go over to her house. If she coughs on me, for example, I will catch Diabetes from her.  
  Fact: Diabetes is not contagious, like a cold or flu. However, one can be more likely to have Diabetes if there is a genetic link or an unhealthy lifestyle factor.

Slide Three:

Type One VS Type Two

Type One:

-Previously identified as juvenile diabetes, due to diagnosing many adolescents.

-Producing insulin is an issue for the body

-Five percent of individuals struggle with this type of Diabetes

Type Two:

* Most common form of Diabetes
* Body does not produce an adequate amount of insulin to maintain a normal amount of glucose in the bloodstream
* Also known as insulin resistant

Slide Four:  
 Diabetes in Native Americans

- Type two Diabetes in Native American communities has increased   
 exponentially over the last fifty years.

- Highest rates are in full-blooded Native Americans

* Type 2, or adult-onset Diabetes, is becoming more prevalent in Native American Youth
* About 50% of the Pima community in Arizona between ages 30 and 64 has diabetes.

Slide Five:

- Diabetes is an increasing problem in today’s society

- Once obtained, Diabetes will never be cured. However, one can learn how to manage life with Diabetes.

- Prevention is crucial to living a healthy lifestyle and avoiding Type two or adult onset Diabetes.

Slide Six:   
 -Visuals

- Discussion and Question/Answer Time

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